

IN THE CLAIMS:

Cancel Claims 10, 22 and 25 without prejudice, amend Claims 1-3, 8, 16, 21, 23 and 26 as follows and add Claims 28-31:

1. (Currently amended) A welding method for gas metal arc welding with continuous electrode feeding, comprising the steps of
conducting ~~short arc and/or~~ spray arc welding,
conducting short pulsing welding for separating off essentially one droplet per pulse,
alternating cyclically between the short pulsing and ~~the short arc or~~ spray arc welding without intentionally extinguishing the arc in between the pulsing and ~~short arc or~~ spray arc welding, and
pre-programming duration or time for at least one of the pulsing and ~~short arc or~~ spray arc welding prior to beginning ~~the method~~.
2. (Currently amended) The welding method as claimed in claim 1, comprising determining the duration or time for the by a frequency for cyclic alternating between the pre-programmed pulsing and ~~short arc or~~ spray arc welding .
3. (Currently amended) A welding power source for MIG/MAG welding comprising
a first process regulator for initiating and controlling ~~short arc and/or~~ spray arc welding,
a second process regulator for initiating and controlling short pulsing welding for separating off essentially one droplet per pulse,

means for alternating cyclically between the ~~short arc or~~ spray arc welding and pulsing welding, and

means for pre-programming duration or time of said pulsing and ~~short arc or~~ spray arc welding prior to commencement of welding.

4. (Previously Presented) The welding power source as claimed in claim 3, wherein the pre-programming means comprises a timer settable for durations or times of 25 to 1000 ms.

5. (Previously Presented) The welding power source as claimed in claim 4, wherein the pre-programming means comprises a timer settable for durations or times of 50 to 300 ms.

6. (Previously Presented) The welding power source as claimed in claim 3, wherein the pre-programming means also comprises a setting device with special support for facilitating programming of a first phase with setting data for short arc or spray arc parameters, and a second phase with setting data for the short pulsing.

7. (Previously Presented) The welding power source as claimed in claim 6, wherein the pre-programming means also comprises a setting device with special support for facilitating programming of the cyclic alternating between the first and second phases.

8. (Currently amended) A control box connectable to a welding source ~~set~~ as claimed in claim 3, additionally comprising a setting device with special support for facilitating programming of a first phase with setting data for ~~short arc or~~ spray arc parameters, and a second phase with setting data for the short pulsing welding.

9. (Previously Presented) The control box as claimed in claim 8, comprising a setting device with special support for facilitating programming of the cyclic alternating between the first and second phases.

Claims 10-15. Canceled

16. (Currently Amended) A control box connectable to a welding set including a welding power source for MIG/MAG welding comprising

a first process regulator for initiating and controlling ~~short arc and/or~~ spray arc welding,

a second process regulator for initiating and controlling short pulsing welding for separating off essentially one droplet per pulse,

means for alternating cyclically between the ~~short arc or~~ spray arc welding and pulsing welding, and

means for pre-programming duration or time of said pulsing and ~~short arc or~~ spray arc welding prior to commencement of welding,

the pre-programming means also comprises a setting device with special support for facilitating programming of a first phase with setting data for ~~short arc or~~ spray arc parameters, and a second phase with setting data for the short pulsing~~[[,]] additionally comprising~~

~~a setting device with special support for facilitating programming of a first phase with setting data for short arc or spray arc parameters, and a second phase with setting data for the short pulsing.~~

17. (Previously Presented) The control box as claimed in claim 16, comprising a setting device with special support for facilitating programming of the alternating between the first and second phases.

Claims 18-20. Canceled

21. (Currently Amended) The welding power source as claimed in claim 3, wherein said means for cyclically alternating between said pulsing and ~~short arc or~~ spray arc welding includes means for determining the duration or time for the pulsing based upon frequency for cyclic alternating between the pre-programmed pulsing and ~~short arc or~~ spray arc welding.

Claim 22. Canceled

23. (Currently Amended) The welding method as claimed in claim 1, wherein said short pulsing welding is conducted by periodically increasing welding current to a pulse current of size and length so that current density in a welding electrode creates sufficient electromagnetic force to separate off one droplet per pulse.

24. (Previously Presented) The welding method as claimed in claim 23, wherein the welding current forms a bell curve above background current for each pulse, with the droplet separating at a peak current value for each pulse.

Claim 25. Canceled

26. (Currently Amended) The welding power source as claimed in claim 3, wherein said second process regulator controls said short pulsing welding by periodically increasing welding current to a pulse current of size and length such that current density in a welding electrode creates sufficient electromagnetic force to separate off one droplet per pulse.

27. (Previously Presented) The welding power source as claimed in claim 26, wherein said second process regulator controls the welding current to form a bell curve above background current for each pulse, with the droplet separating at a peak current value for each pulse.

28. (New) The welding method as claimed in claim 1, additionally comprising the steps of cyclically alternating between
short arc and the spray arc welding, and
the short arc and pulsing welding.

29. (New) The control box as claimed in claim 3, additionally comprising means for cyclically alternating between short arc and the spray arc welding, and the short arc and pulsing welding.

30. (New) The welding method as claimed in claim 1, additionally comprising the step of
welding vertical V-joints in aluminum or stainless steel material 5-10 mm.
thick without weaving.

31. (New) The control box as claimed in claim 3, additionally comprising means for welding vertical V-joints in aluminum or stainless steel material 5-10 mm. thick without weaving.